

We claim:

1. A photosensitive laminate structure comprising at least:

- a) an ink receptive, radiation transmissive layer; and
- b) at least one photosensitive resist layer.

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2. The photosensitive laminate structure of claim 1, further comprising a carrier layer.

3. The photosensitive laminate structure of claim 2, wherein the carrier layer comprises polyester, biaxially oriented polypropylene, high density polyethylene, low density polyethylene, or other polymer films.

4. The photosensitive laminate structure of claim 1, wherein the ink receptive, radiation transmissive layer is water-soluble.

5. The photosensitive laminate structure of claim 1, wherein the ink receptive, radiation transmissive layer is removable from the photosensitive resist layer upon exposure to water.

6. The photosensitive laminate structure of claim 1, wherein the ink receptive, radiation transmissive layer has anti-block properties.

7. The photosensitive laminate structure of claim 1, wherein the ink receptive, radiation transmissive layer is receptive to inkjet ink.

8. The photosensitive laminate structure of claim 1, wherein the ink receptive, radiation transmissive layer is transmissive to light of general wavelength 300 to 450 nm.

9. The photosensitive laminate structure of claim 1, wherein the ink receptive, radiation

5 transmissive layer comprises polyvinyl alcohol, a polyethylene dispersion, or a mixture thereof.

10. The photosensitive laminate structure of claim 1, wherein the ink receptive, radiation transmissive layer comprises at least 20 dry weight percent polyvinyl alcohol.

11. The photosensitive laminate structure of claim 1, wherein the ink receptive, radiation transmissive layer comprises calcium carbonate.

12. The photosensitive laminate structure of 10, wherein the ink receptive, radiation transmissive layer comprises at least 25 dry weight percent calcium carbonate.

13. The photosensitive laminate structure of claim 1, wherein the ink receptive, radiation transmissive layer comprises organic and inorganic particles.

14. The photosensitive laminate structure of claim 13, wherein the ink receptive, radiation transmissive layer comprises calcium carbonate and a polyethylene dispersion.

15. The photosensitive laminate structure of claim 1, wherein the photosensitive layer comprises an adhesive.

16. The photosensitive laminate structure of claim 1, wherein the laminate contains two photosensitive layers:

a first tacky photosensitive layer; and

a second substantially less tacky photosensitive layer.

17. The photosensitive laminate structure of claim 1, wherein the ink receptive, radiation transmissive layer comprises a printable cover sheet.

18. The photosensitive laminate structure of claim 1, wherein the photosensitive layer comprises a pressure sensitive adhesive composition having a T_g of less than about -40°C .

19. The photosensitive laminate structure of claim 1, wherein the photosensitive layer comprises a photo crosslinked, aqueous developed polyvinyl alcohol-based polymeric resin.

20. The photosensitive laminate structure of claim 1, wherein the photosensitive layer comprises from 1 to 40 weight percent of a polymeric photosensitive resin and from 30 to 98 weight percent of a polyvinyl acetate based upon the total dry weight of the photosensitive layer.

21. The photosensitive laminate structure of claim 1, further comprising a membrane layer.

22. The photosensitive laminate structure of claim 21, wherein the membrane layer comprises polyvinyl alcohols, polyvinyl butyral, polyvinyl formal, polyurethane, nitrocellulose, a polyvinyl pyrrolidone copolymer, and urethane acrylic polymers.

23. A method of forming a relief pattern in a photoresist substrate, the method comprising:

a) providing a photosensitive laminate structure comprising at least an ink receptive, radiation transmissive layer, and at least one photosensitive resist layer formed into a single, photosensitive laminate;

b) printing a pattern on the ink receptive, radiation transmissive layer;

c) exposing the laminate to actinic radiation to modify the photosensitive resist layer; and

d) removing a portion of the photosensitive resist layer corresponding to the pattern formed on the ink receptive, radiation transmissive layer.

24. The method according to claim 23, further comprising removing the ink receptive, radiation transmissive layer.

25. The method according to claim 24, wherein the ink receptive, radiation transmissive layer is removed following application of water.